1899MNRAS..59..340.

Occultations Observed at the Royal Observatory, Cape of Good Hope, during the Lunar Eclipse, 1898 December 27.

(*Communicated by David Gill, C.B., F.R.S., &c., H.M. Astronomer.*)

A list of predictions was received from the Pulkowa Observatory. The observers, instruments, and their positions referred to the Cape Transit Circle, were :—

Observer.	Instrument.	δ Long.	δ Lat.	Alt.
		s	″	
H = S. S. Hough	7-in. Heliometer	−0·05	+2·01	About 40 ft.
L = J. Lunt	18-in. McClean Refractor	+ ·03	−3·43	
I = R. T. A. Innes	7-in. equatorial	+ ·12	−2·02	
V L = V. A. Löwinger	10-in. astrographic guiding telescope	− ·10	+4·42	

Position of T.C.

Long. − $1^h\ 13^m\ 54^s{\cdot}76$

Lat. − 33° 56′ 3″·5

δ Long. − = E. of T.C.

δ Lat. − = S. of T.C.

The definition became very bad towards the end of the eclipse. All the observers remark that the stars at disappearance seemed to enter on the Moon's disc.

Observations.

No.	Pulkowa List.	Name.	Mag.	Obsr.	Inst.	Phase.	Cape Sid. Time.	Greenwich M.T.	Remarks.
							h m s	h m s	
1	—	Anon = B.D. + 24°, 1298 + 30ˢ ±	9·7	L.	18-in.	D.	6 23 46·2	10 44 7·6	
2	33	B.D. + 24°, 1300	9·4	„	„	„	6 33 8·7	10 53 28·6	
„	„			I.	7	„	6 33 8·7	10 53 28·6	Very good.
„	„			V.L.	10	„	6 33 8·7	10 53 28·6	Faint.
3	25	B.D. + 24°, 1296	9·4	L.	18	R.	7 0 15·9	11 20 31·3	
„	„			V.L.	10	„	7 0 16·2	11 20 31·6	Good.
4	37	Arg. + 24°, 1303	9·1	L.	18	D.	7 1 47·7	11 22 2·9	
„	„			I.	7	„	7 1 47·7	11 22 2·9	Very good.
„	„			V.L.	10	„	7 [2] 48·9	11 22 4·1	Uncertain.
5	44	B.D. + 24°, 1306	9·2	L.	18	„	7 10 41·7	11 30 55·4	
„	„			I.	7	„	7 10 41·2	11 30 54·9	Good.
„	„			V.L.	10	„	7 10 40·9	11 30 54·6	Very fair.
6	—	Anon = B.D. + 24°, 1303 + 13ˢ − 0′·8	9·5	I.	7	„	7 10 49·7	11 31 3·4	Fair.

Downloaded from http://mnras.oxfordjournals.org/ at Periodicals Dept on June 28, 2015

© Royal Astronomical Society • Provided by the NASA Astrophysics Data System

1899MNRAS..59..340.

No.	Pulkowa List.	Name.	Mag.	Obsr.	Inst.	Phase.	Cape Sid. Time.			Greenwich M.T.			Remarks.
							h	m	s	h	m	s	
7	42	B.D. + 24°, 1305	9·2	H.	Heliom.	„	7	16	36·0	11	36	48·8	Good.
„	„			L.	18-in.	„	7	16	36·9	11	36	49·7	
„	„			I.	7	„	7	16	37·3	11	36	50·1	Very good.
„	„			V.L.	10	„	7	16	36·9	11	36	49·7	Good.
8	–	B.D. + 24°, 1311	9·4	L.	18	„	7	25	55·7	11	46	6·9	Bad definition.
9	49	Arg. + 24°, 1310	9·2	„	„	„	7	26	53·2	11	47	4·3	
10	48	B.D. + 24°, 1309	9·0	H.	Heliom.	„	7	30	35·5	11	50	46·0	Very good.
„	„			L.	18-in.	„	7	30	35·4	11	50	45·9	
„	„			I.	7	„	7	30	35·4	11	50	45·9	Very good.
„	„			V.L.	10	„	7	30	35·5	11	50	46·0	Good.
11	47	B.D. + 24°, 1308	9·3	I.	7	„	7	31	58	11	52	8	Worthless.
„	„			V.L.	10	„	7	31	58·7	11	52	8·9	Fair, faint.
12	56	B.D. + 24°, 1313	9·2	L.	18	„	7	53	40·7	12	13	47·4	
„	„			I.	7	„	7	53	42	12	13	48	Worthless.
„	„			V.L.	10	„	7	53	41·2	12	13	47·9	Bad.

Royal Observatory, Cape of Good Hope:
1899 *January* 6.

On the Use of the Electric Light for the Artificial Star of a Zöllner Photometer. By W. de Sitter.

(*Communicated by David Gill, C.B., &c., H.M. Astronomer at the Cape.*)

During the last few months I have been engaged on photometric work in connection with an investigation of the systematic difference between visual and photographic magnitudes of stars in the Milky Way and near its poles.

The instrument used is the 6-inch equatorial, by Grubb, belonging to the Cape Observatory, to which an ordinary Zöllner photometer has been adapted in the way recommended by Zöllner (*Photometrische Untersuchungen*, Plates V. and VI.). As is fully explained in Zöllner's work, the paraffin lamp was automatically kept in a horizontal position while the telescope was being driven by the clockwork. On nights without wind the lamp performed very satisfactorily, and remained practically constant throughout the time of observation—usually from 1½ to 2 hours. But there are very few nights without wind at the Cape; and when the south-easter was blowing with its usual velocity of between 15 and 30 miles an hour, it was absolutely impossible to observe. This induced me to try to

Downloaded from http://mnras.oxfordjournals.org/ at Periodicals Dept on June 28, 2015

© Royal Astronomical Society • Provided by the NASA Astrophysics Data System